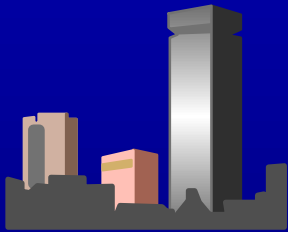


Fiber Transport Services (FTS) Development

IBM Global Services

OVERVIEW



02/04/97 wlm/mel

FTS Connectivity Marketplace

- **IBM S/390 Enterprise Data Center Environment - World Wide**
- **High End Customer Set**
 - Banks
 - Insurance Companies
 - Hospitals
 - Airlines
 - Utilities
 - Government
 - etc.

The FTS Story

- Customer demand to eliminate under-floor fiber optic congestion.
- Simplify installation and enable easier system link reconfiguration.
- Structured Cabling System includes:
 - Planning and Design
 - Installation
 - IBM Service

History

■ 1991

- Quick disconnect trunk needed
- Multifiber connector requirement
- Product search initiated
- No commercial connector available.

■ 1992

- Multifiber connector search continues
- no viable options

History Cont...

■ 1993

- Customer demand grows
- Linear Array Connector Vendors Identified
- Five Major Players evaluated
- US CONEC Selected
 - MT ferrule technology stable
 - MT ferrule already in use by Japan's Telco's

History Cont....

■ 1994

- Trunks terminated with MTP
- MTP connectorized trunk shipments begin

■ 1995

- MTP Trunk install base grows
- No Field problems.

■ 1996

- Decision made to qualify MTP Connector
- No Field problems.
- MTP volumes grow, prices decline.

History Cont....

■ 1997

- MTP Qualification completion 1Q97
- IBM Logo on MTP Connector
- MTP install base in 10's of thousands
- MTP Prices continue to decline

IBM MTP Performance Specifications

- Loss 0.2 dB/fiber Avg., 0.45dB (3 sigma Max)
- Environmental Testing (Less than 0.5dB change)
 - Durability 500 cycles plus
 - Thermal Aging (21 days @ +80 deg C)
 - Humidity (95% RH @ +60 deg C)
 - Temp Cycling (+60 deg C / -40 deg C)
 - Thermal Cycling (0 deg C / +75 deg C)
- Cable Retention (22 lbf)